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Frank Sieckmann

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TWO PRUDENTIAL PLAZA, SUITE 4900  
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CHICAGO, IL 60601

EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/576,453  
Filing Date: April 20, 2006  
Appellant(s): SIECKMANN ET AL.

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For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/18/2010 appealing from the Office action mailed 05/25/2010.

**(1) Real Party in Interest**

The patent application that is subject to this appeal is assigned to Leica Microsystems CMS GmbH.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims Cancelled: 1-24

Claims pending: 25-50

Claims rejected: 25-50

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being

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maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

5,998,129	Schutze et al.	12-1999
2004/0252291	Schutze	12-2004
DE 19636074	Mengel	03-1998
2002/0025511	Bova	02-2002
2002/0048747	Ganser	04-2002
6,377,710	Saund	9-2002
2001/0053245	Sakai et al.	12-2001
WO 03036266	Schutze	5-2003

Schachter et al., "Some Experiments in Image Segmentation by Clustering of Local Feature Value", Pattern Recognition, Vol. 11, (1979), pp. 19-28

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 25-26, 29, 45 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Schutze et al. (US Pat. 5,998,129) (cited by applicant).**

Regarding claim 25, Schutze et al. discloses a method for laser microdissection comprising: capturing an electronic image of at least one image detail of a specimen (Col. 7, Lines 4-7); processing the at least one image detail using image analysis so as to automatically ascertain at least one object to be cut out (Col. 7, Line 8-13); automatically calculating a contour of the at least one object (Col. 7. Lines 10-13, **“travels automatically under the control of a computer program in accordance with a predetermined patterned in essentially circulation or a spiral shape around the chosen object 10”** inherently the same as automatically calculating a contour of the at least one object); automatically defining, based on the calculated contour, a nominal cutting line around the at least one object to be cut out (Col. 7, Line 13-15); and subsequently cutting out the at least one object in response to a relative motion between a laser beam and the specimen (Col. 7, Lines 16-21).

Regarding claim 26, Schutze et al. further discloses a step of preparing the electronic image for the processing using a contrasting method based on camera (Col. 6, Lines 41-46).

Regarding claim 29, Schutze et al. further discloses the electronic image is either a grayscale image or a color image (Col. 7, Line 5-7).

Regarding claim 45, Schutze et al. further discloses a defined clearance distance in the specimen so as to prevent a neighboring object from being sliced through (Col. 7, Lines 13-20).

Regarding claim 47, Schutze et al. further discloses superimposing, by an imaging device, the nominal cutting line onto the electronic image so as to control results of the cutting out (Col. 6, Lines 29-64).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 25-26, 29, 45 and 47 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) (hereinafter Schutze'129) in view of Schutze (US Pub. 2004/0252291) (hereinafter Schutze'291) (newly cited).**

Regarding claim 25, Schutze'129 discloses a method for laser microdissection comprising: capturing an electronic image of at least one image detail of a specimen (Col. 7, Lines 4-7); processing the at least one image detail using image analysis so as to automatically ascertain at least one object to be cut out (Col. 7, Line 8-13); automatically defining, based on the calculated contour, a nominal cutting line around the at least one object to be cut out (Col. 7, Line 13-15); and subsequently cutting out the at least one object in response to a relative motion between a laser beam and the

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specimen (Col. 7, Lines 16-21). Schutze'129 does not disclose automatically calculating a contour of the at least one object. Schutze'291 discloses automatically calculating a contour of the at least one object (Par. 15 and 42). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129, automatically calculating a contour of the at least one object, as taught by Schutze'291, for the purpose of automatic surface area calculation after the object is scanned.

Regarding claim 26, Schutze'129 further discloses a step of preparing the electronic image for the processing using a contrasting method based on camera (Col. 6, Lines 41-46).

Regarding claim 29, Schutze'129 further discloses the electronic image is either a grayscale image or a color image (Col. 7, Line 5-7).

Regarding claim 45, Schutze'129 further discloses a defined clearance distance in the specimen so as to prevent a neighboring object from being sliced through (Col. 7, Lines 13-20).

Regarding claim 47, Schutze'129 further discloses superimposing, by an imaging device, the nominal cutting line onto the electronic image so as to control results of the cutting out (Col. 6, Lines 29-64).

**Claims 27 and 28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291) and further view of Schachter et al. (XP-0002269476) (cited by applicant).**

Regarding claim 27, Schutze'129/ Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for the processing the image detail is performed using a segmenting of the electronic image: defining a grayscale threshold value on the basis of the electronic image; and converting, by making a comparison with the grayscale value threshold, the electronic image to a binary image including only the at least one object segmented. Schachter et al. discloses a processing the image detail is performed using a segmenting of the electronic image: defining a grayscale threshold value on the basis of the electronic image (Page 19; Left column, Par. 2) and converting, by making a comparison with the grayscale value threshold (Page 19; Left column, Par. 3), the electronic image to a binary image including only the at least one object segmented (Page 24; Left column, Par. 2). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291, the processing the image detail is performed using a segmenting of the electronic image: defining a grayscale threshold value on the basis of the electronic image; and converting, by making a comparison with the grayscale value threshold, the electronic image to a binary image including only the at least one object segmented, as taught by Schachter et al., for the purpose of segmenting an object in an image by gray level threshold.

Regarding claim 28, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for the defining a grayscale threshold value is performed by manually setting the threshold value. Schachter et al. discloses a



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defining a grayscale threshold value is performed by manually setting the threshold value (Page 19, Right column, Par. 4 to Page 20, Left column, Par. 2).

**Claims 30-37 and 48-49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291), Schachter et al. (XP-0002269476) and further view of Mengel (DE 19636074) (cited by applicant).**

Regarding claim 30, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the processing the image detail includes: defining specific classification features characterizing the at least one object so as to ascertain the at least one object; classifying the at least one object using image analysis by determining from the image actually existing object features of the at least one object segmented and comparing the existing object features to the defined specific classification features. Mengel discloses a processing the image detail includes: defining specific classification features characterizing the at least one object so as to ascertain the at least one object (Page 1, Par. 6; English translation); classifying the at least one object using image analysis by determining from the image actually existing object features of the at least one object segmented and comparing the existing object features to the defined specific classification features (Page 1, Par. 10; English translation). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291/Schachter, the processing the image detail includes: defining specific classification features characterizing the at least one object so as to ascertain the at least one object;

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classifying the at least one object using image analysis by determining from the image actually existing object features of the at least one object segmented and comparing the existing object features to the defined specific classification features, as taught by Mengel, for the purpose of classifying parts which can be examined on the basis captured images.

Regarding claim 31, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the comparing is performed so as to determine whether the actually existing object features conform with the defined specific classification features. Mengel discloses comparing is performed so as to determine whether the actually existing object features conform with the defined specific classification features (Page 2, Par. 1; English translation).

Regarding claim 32, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the defining specific classification features includes defining, in each instance for different object types, individual feature data records including the specific classification features. Mengel discloses a defining specific classification features includes defining, in each instance for different object types, individual feature data records including the specific classification features (Page 2, Par. 14; English translation).

Regarding claim 33, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the defining specific classification features is performed automatically or manually in a learning process including inputting the classification features interactively or automatically by suitably

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marking the at least one object. Mengel discloses the defining specific classification features is performed automatically or manually in a learning process including inputting the classification features interactively or automatically by suitably marking the at least one object (Page 2, Par. 10; English translation).

Regarding claim 34, Schutze'129 further discloses the marking is performed using a mouse click (Col. 7, Line 10).

Regarding claim 35, Schutze'129 further discloses the automatically defining the nominal cutting line is performed so as to exclude unclassified objects (Col. 7, Lines 13-26).

Regarding claim 36, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the defining specific classification features includes defining a range of values for at least one of the specific classification features. Mengel discloses defining specific classification features includes defining a range of values for at least one of the specific classification features (Page 2; Par. 16-18; English translation).

Regarding claim 37, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the excluding from the nominal cutting line objects, identified by the comparing the existing object features to the defined specific classification features, that border on an edge of the image detail or that are only partially visible in the image detail. Mengel discloses an excluding from the nominal cutting line objects, identified by the comparing the existing object features

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to the defined specific classification features, that border on an edge of the image detail or that are only partially visible in the image detail (Page 3, Par. 1; English translation).

Regarding claims 48 and 49, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above **except** for the applying a mathematical transformation so as to automatically map the nominal cutting line onto a laser cutting line; and scaling the laser cutting line as a function of the image magnification. Mengel discloses applying a mathematical transformation so as to automatically map the nominal cutting line onto a laser cutting line; and scaling the laser cutting line as a function of the image magnification (Page 2, Par. 16; English translation).

**Claims 38, 46 and 50 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291) and further view of Bova (US Pub. 2002/0025511) (previously cited).**

Regarding claim 38 and 46, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for at least one object includes a plurality of objects disposed in close proximity to one another, and further comprising combining the plurality of objects into a cluster, and wherein the automatically defining a nominal cutting line is performed so as to define a single shared nominal cutting line surrounding the cluster. Bova discloses at least one object 37 (Fig. 3) includes a plurality of objects 40, 41 (Fig. 3) disposed in close proximity to one another, and further comprising combining the plurality of objects into a cluster (Refer to Fig. 3), and wherein the automatically defining a nominal cutting line is performed so as

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to define a single shared nominal cutting line surrounding the cluster (Par. 61-69). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291, at least one object includes a plurality of objects disposed in close proximity to one another, and further comprising combining the plurality of objects into a cluster, and wherein the automatically defining a nominal cutting line is performed so as to define a single shared nominal cutting line surrounding the cluster, as taught by Bova, for the purpose of combining plurality object to one cluster and remove it one cutting.

Regarding claim 50, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for modifying the nominal cutting line so as to compensate for imprecise repositioning of the microscope stage. Bova discloses modifying the nominal cutting line so as to compensate for imprecise repositioning of the microscope stage (Par. 77).

**Claims 39-40 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291) and further view of Ganser (US Pub. 2002/0048747) (previously cited).**

Regarding claim 39, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for applying a mathematical transformation so as to automatically map the nominal cutting line onto a laser cutting line; and converting the laser cutting line into the relative motion between the laser beam and the specimen so as to provide a laser cut. Ganser discloses applying a mathematical transformation so as to automatically map the nominal cutting line onto a

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laser cutting line; and converting the laser cutting line into the relative motion between the laser beam and the specimen so as to provide a laser cut (Par. 42-44). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291, applying a mathematical transformation so as to automatically map the nominal cutting line onto a laser cutting line; and converting the laser cutting line into the relative motion between the laser beam and the specimen so as to provide a laser cut, as taught by Ganser, for the purpose of mapping the image to the cutting onto the laser to perform a cut.

Regarding claim 40, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above **except** for initiating, by a user or automatically, the relative motion between the laser beam and the specimen. Ganser discloses an initiating, by a user or automatically, the relative motion between the laser beam and the specimen (Par. 44).

**Claims 41-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129), Schutze (US Pub. 2004/0252291), Ganser (US Pub. 2002/0048747 and further view of Saund (US Pat. 6,377,710) (previously cited).**

Regarding claim 41, Schutze'129/Schutze'291/Ganser disclose substantially all features of the claimed invention as set forth above including from Schutze'129, the automatically calculating includes determining the outer contour of the at least one object using image analysis (Col. 7, Lines 9-13) and from Ganser, the contour 25, 26, 27 and 28 (Fig. 2) is an outer contour of the at least one object 24 (Fig. 2) except for

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converting the outer contour into a numerical code. Saund discloses converting the outer contour into a numerical code (Col. 4, Line 60 to Col. 5, Line 8). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291/Ganser, converting the outer contour into a numerical code, as taught by Saund, for the purpose of mapping the boundary contour on the perimeter of the object.

Regarding claim 42, Schutze'129/Schutze'291/Ganser disclose substantially all features of the claimed invention as set forth above **except** the numerical code is a Freeman code or a chain code. Saund discloses the numerical code is a chain code (Col. 4, Line 60 to Col. 5, Line 8).

**Claim 43 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291) and further view of Sakai et al. (US Pub. 2001/0053245) (previously cited).**

Regarding claim 43, Schutze'129/Schutze'291 disclose substantially all features of the claimed invention as set forth above except for performing an automatic shading correction including: recording an empty image without a specimen; storing the empty image as a shading correction image; and applying an offset correction to the captured electronic image using the shading correction image. Sakai et al. discloses an automatic shading correction (Par. 39) including: recording an empty image without a specimen (par. 53); storing the empty image as a shading correction image; and applying an offset correction to the captured electronic image using the shading correction image (Par. 52). It would have been obvious to one of ordinary skill in the art

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at the time of the invention was made to utilize in Schutze'129/Schutze'291, performing an automatic shading correction including: recording an empty image without a specimen; storing the empty image as a shading correction image; and applying an offset correction to the captured electronic image using the shading correction image, as taught by Sakai et al., for the purpose of calibrating the images recording apparatus.

**Claim 44 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Schutze et al. (US Pat. 5,998,129) in view of Schutze (US Pub. 2004/0252291), Schachter et al. (XP-0002269476) and further view of Schuetze (WO 03036266) (previously cited).**

Regarding claim 44, Schutze'129/Schutze'291/Schachter disclose substantially all features of the claimed invention as set forth above except for removing a specific unwanted object of the at least one object from the binary image using image analysis morphology, the unwanted object being not designated for microdissection. Schuetze discloses removing a specific unwanted object of the at least one object from the binary image using image analysis morphology, the unwanted object being not designated for microdissection (Page 2, Par. 5-6; "The selection ... selection of the desired objects"; English translation). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129/Schutze'291/Schachter, removing a specific unwanted object of the at least one object from the binary image using image analysis morphology, the unwanted object being not designated for microdissection, as taught by Schuetze, for the purpose of cutting out only the wanted object that have mapping into the cutting line.



**(10) Response to Argument**

**Rejection of claims 25, 26, 29 and 47 under 35 U.S.C. § 102 (b) based on  
Schutze '129**

Appellants argue that Schutze '129 fails to disclose “automatically calculating a contour of the at least one object; [and] automatically defining, based on the calculated contour, a nominal cutting line around the at least one object to be cut out” as recited in the independent claim 25. The Examiner respectfully disagrees. Schutze '129 discloses automatically calculating a contour of the at least one object (Col. 7, Lines 10-13; The microscope slide travels automatically under the control of a computer program in accordance with a predetermined pattern in essentially circular or a spiral shape around the chosen object 10. Therefore, the computer program does all the calculating of the contour of the object so that the microscope slide travels automatically); automatically defining, based on the calculated contour, a nominal cutting line around the at least one object to be cut out (Col. 7, Lines 13-18; “the marker on the monitor can be regarded as a pointer with which the outline of the desired biological object is drawn. If at the same time the laser, with a pulse frequency of a round 15 to 20 Hz, fires, all material that is in the line of fire in the region of the marker is removed or destroyed”). Because Schutze '129 discloses the above recited features of claimed 25, therefore, Schutze '129 is anticipated claim 25, or its dependent claims 26, 29 and 47.

**Rejection of claims 25, 26, 29 and 47 under 35 U.S.C. § 103 (a) based on  
Schutze '129 and Schutze '291**

Appellants argue that Schutze '129 does not disclose "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" and Schutze '291 does not cure the deficiencies of Schutze '129 and fails to teach or suggest automatically calculating a contour of at least one object, as required by claim 25. The Examiner respectfully disagrees. As discussed in the Final office action, Schutze '129 discloses a method for laser microdissection comprising: capturing an electronic image of at least one image detail of a specimen (Col. 7, Lines 4-7); processing the at least one image detail using image analysis so as to automatically ascertain at least one object to be cut out (Col. 7, Line 8-13); automatically defining, based on the calculated contour, a nominal cutting line around the at least one object to be cut out (Col. 7, Line 13-15); and subsequently cutting out the at least one object in response to a relative motion between a laser beam and the specimen (Col. 7, Lines 16-21). Schutze'129 does not disclose automatically calculating a contour of the at least one object. Schutze'291 discloses automatically calculating a contour of the at least one object (Par. 15 and 42). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize in Schutze'129, automatically calculating a contour of the at least one object, as taught by Schutze'291, for the purpose of automatic surface area calculation after the object is scanned. Schutze '291 discloses in paragraph [0015], "the laser micro-dissection system equipped with an automatic surface area calculation function, which makes it possible, after the drawing of a cutting line around a desired object, for the area of the object thus selected and enclosed by

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this cutting line to be calculated” and also in paragraph [0042], “the software may exhibit a function for the automatic calculation of the surface content of a biological object selected and/or marked in the manner described previously, which is delimited by a cutting line 16 drawn previously. The surface content of the individual biological object in each case is the represented, for example, in  $\mu\text{m}^2$  on the screen 8 of the laser micro-dissection system”. Therefore, Schutze ‘291 clearly teaches automatically calculating a contour of at least one object, as required by claim 25.

**Rejection of claims 27 and 28 under 35 U.S.C. § 103 (a) based on Schutze ‘129, Schutze ‘291 and Schachter**

Appellants argue that Schachter does not cure the deficiencies of Schutze ‘129 and Schutze ‘291 with respect to claim 25 which recites “automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out” and Schachter fails to teach or suggest automatically calculating a contour of at least one object, as required by claim 25. The Examiner respectfully disagrees. The combination of the Schutze ‘129 and Schutze ‘291 teach “automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out” as provided above. Schachter reference is used to teach the missing limitations set forth in claims 27 and 28 only. The appellants did not make any substantive arguments regarding claims 27 and 28. Therefore, these dependent claims 27 and 28 are treated as if stand and full with the independent claim 25.

**Rejection of claims 30-37 and 48-49 under 35 U.S.C. § 103 (a) based on  
Schutze '129, Schutze '291 and Schachter and Mengel**

Appellants argues that Mengel does not cure the deficiencies of Schutze '129, Schutze '291 and Schachter with respect to claim 25 which recites "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. Mengel reference is used to teach the missing limitations set forth in claims 30-37 and 48-49 only. The appellants did not make any substantive arguments regarding claims 30-37 and 48-49. Therefore, these dependent claims 30-37 and 48-49 are treated as if stand and full with the independent claim 25.

**Rejection of claims 38, 46 and 50 under 35 U.S.C. § 103 (a) based on  
Schutze '129, Schutze '291 and Bova**

Appellants argue that Bova does not cure the deficiencies of Schutze '129 and Schutze '291 with respect to claim 25 which recites "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined,

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based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. Bova reference is used to teach the missing limitations set forth in claims 38, 46 and 50 only. The appellants did not make any substantive arguments regarding claims 38, 46 and 50. Therefore, these dependent claims 38, 46 and 50 are treated as if stand and full with the independent claim 25.

**Rejection of claims 39 and 40 under 35 U.S.C. § 103 (a) based on Schutze '129, Schutze '291 and Ganser**

Appellants argue that Ganser does not cure the deficiencies of Schutze '129 and Schutze '291 with respect to claim 25 which recites "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. Ganser reference is used to teach the missing limitations set forth in claims 39 and 40 only. The appellants did not make any substantive arguments regarding claims 39 and 40. Therefore, these dependent claims 39 and 40 are treated as if stand and full with the independent claim 25

**Rejection of claims 41 and 42 under 35 U.S.C. § 103 (a) based on Schutze '129, Schutze '291, Ganser, and Saund**

Appellants argue that Saund does not cure the deficiencies of Schutze '129, Schutze '291 and Ganser with respect to claim 25 which recites "automatically

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calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. Saund reference is used to teach the missing limitations set forth in claims 41 and 42 only. The appellants did not make any substantive arguments regarding claims 41 and 32. Therefore, these dependent claims 41 and 42 are treated as if stand and full with the independent claim 25.

**Rejection of claim 43 under 35 U.S.C. § 103 (a) based on Schutze '129, Schutze '291 and Sakai**

Appellants argue that Sakai does not cure the deficiencies of Schutze '129 and Schutze '291 with respect to claim 25 which recites "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. Sakai reference is used to teach the missing limitations set forth in claim 43 only. The appellants did not make any substantive arguments

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regarding claim 43. Therefore, the dependent claim 43 is treated as if stand and full with the independent claim 25.

**Rejection of claim 44 under 35 U.S.C. § 103 (a) based on Schutze '129, Schutze '291, Schachter and WO '266**

Appellant argue that WO '266 does not cure the deficiencies of Schutze '129, Schutze '291 and Schachter with respect to claim 25 which recites "automatically calculating a contour of the at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out". The Examiner respectfully disagrees. The combination of the Schutze '129 and Schutze '291 teach "automatically calculating a contour of at least one object; [and] automatically defined, based on the calculated contour, a nominal cutting line around the at least one object to be cut out" as provided above. WO '266 reference is used to teach the missing limitations set forth in claim 44 only. The appellants did not make any substantive arguments regarding claim 44. Therefore, the dependent claim 44 is treated as if stand and full with the independent claim 25.

In conclusion, the claims on appeal are not novel as it pertains to a method for laser microdissection. The Examiner has provided proper evidence support prima facie case of obviousness with respect to the rejection asserted above. The Examiner respectfully requests that the rejection of the claims be affirmed and such claims be indicated as not inventive or allowable over the prior art.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/HUNG NGUYEN/

Examiner, Art Unit 3742

Conferees:

/M. Alexandra Elve/

Primary Examiner, Art Unit 3742

(Acting SPE 3742)

/Henry Yuen/

Supervisory Patent Examiner, TC 3700